myline spa

MARS
USER'S GUIDE

WM00175
MARS SPA
User's manual

Version: 01.2014

Standard Specification:

2130×1600×780 mm

Shell material	PU reinforced antimicrobial acrylic (6,3 mm)
Persons	3 Prs
Reclining places	2 Prs
Sitting place	1 Prs
Water volume	660 l
Net weight	~250 kg
Power requirement	1×25 A (230V/50Hz) optimum 1×16 A (230V/50Hz) minimum
Total number of jets	37
Hydro massage pump	1×2 HP 2 speed (230V/50Hz)
Ozone generator	1
Diverter	1
Filter	1
Chromotherapy lighting	12×1 LED
Heating unit	1 (3kW/230V/50Hz)
Air inlet regulator	3
Computer control	VL260
3/4" Drain	1
Maintenance-free Synthetic Cabinet	1 set
Headrests	2
Thermo cover with lock	1

Warranty letter

Serial number:.....

Model: .....

Distributor	*Retailer*
Date of buying:	Date of buying:
.....	.....
Signature:	Signature:
.....	.....
(stamp)	(stamp)

2013 MyLine Spa Limited Warranty
WARRANTY FOR EXPORT
Warranty; Limitations of Liability and Damages.

Company offers a limited warranty comprised of replacement of faulty parts and offers no reimbursement for labour of repairs outside any abnormal failure rates to be determined by both parties.

5 years on spa shell: WELLIS warrants the structure of the spa shell against defects in workmanship and material for a period of 5 years, subject to the limitations and conditions listed in this Warranty.

3 years on spa shell surface: The acrylic spa shell is warranted against cracking, blistering or delaminating due to defects in materials or workmanship for three years from the original date of delivery.

2 years on spa plumbing: Spa fittings and plumbing are warranted against leaks due to defects in materials or workmanship for two years from the original date of delivery. There is no labour coverage on internal jet parts replacement, cleaning or adjusting.

2 years on standard and optional spa equipment – Balboa Control Systems, Jet Pump(s), Laing Circulation Pump, Heater, Wi-Fi module, IR receiver: The spa equipment systems are warranted against failure due to defects in materials or workmanship for two years from the date of delivery. Fuses, bulbs, and seals are not covered.

2 years on Pulsar hydrotherapy system: The factory installed Pulsar hydrotherapy systems are warranted against failure due to defects in materials or workmanship for one year from the original date of delivery.

2 years on spa cabinets/skirts: The factory installed spa cabinets/skirts are warranted against failure due to defects in materials or workmanship for one year from the original date of delivery.

2 years on ozone generator: The ozone generator is warranted against failure due to defects in materials or workmanship for one year from the original date of delivery.

2 years on audio system components: The factory installed audio components (i.e. power supply, speakers, wires, etc.) are warranted against failure due to defects in materials or workmanship for one year from the original date of delivery. There is no in-field labour service on these items.

2 years on LED lights: The factory installed LED lights are warranted against failure due to defects in materials or workmanship for one year from the original date of delivery.

2 years on UV-C sanitizer lamp: The factory installed UV-C sanitizer lamps are warranted against failure due to defects in materials or workmanship for one year from the original date of delivery.

2 years on I.S.I.S. water disinfection system: The factory installed I.S.I.S. water disinfection systems are warranted against failure due to defects in materials or workmanship for one year from the original date of delivery.

1 year on blower: The blower is warranted against failure due to defects in materials or workmanship for one year from the original date of delivery.

1 year on thermo cover: The thermo cover is warranted against failure due to defects in materials or workmanship for one year from the original date of delivery.

1 year on WELLIS Spa Umbrella: The factory installed WELLIS Spa Umbrellas are warranted against failure due to defects in materials or workmanship for one year from the original date of delivery.

1 year on LCD TV system: The factory installed LCD TV systems are warranted against failure due to defects in materials or workmanship for one year from the original date of delivery.

90 days on skimmer house: Skimmer houses are subject to water chemistry variation and are warranted for ninety days from the original date of delivery. NO warranty on filters, spa pillows and skimmer house tops.

WARRANTY PERFORMANCE

1. This warranty does not cover cleaning or adjusting spa or for customer error in following correct procedures.
2. WELLIS Magyarország Kft. reserves the right to substitute a spa or component of equivalent value, either new or factory reconditioned and any such repair or replacement shall assume as its warranty only the remaining portion of the warranty on the original product.
3. WELLIS Magyarország Kft. is not liable for any costs associated with in-ground, in-deck, or in-home installations or removal. Costs associated with installations other than standard residential portable spa use will be the sole responsibility of the spa owner. The spa owner is responsible for any freight and/or delivery and set up charges for a replacement spa.
4. The radio reception is not covered under warranty due to the following: The radio signal reception may be impaired by the positioning of the spa next to or near structures, high power lines, main power lines or metallic towers. The signal reception may be impaired if the spa is located near hills or it is in a valley or simply outside the broadcasting range of the radio stations. The position of the spa and radio may be "out of phase with the bandwidth" or the radio frequency. External signal reception assistance may be required and is not part of this warranty.
5. WELLIS Magyarország Kft. shall not be liable for any incidental or consequential damages for breach of any expressed or implied warranty, breach of contract, negligence, strict liability, or any other legal theory related to this product. All consequential expenses including loss of use, damages, or contingent liabilities arising out of any alleged deficiencies of the spa are specifically excluded from this warranty.
6. Warranty coverage is only extended to the original buyer. Spas purchased from anyone other than a current WELLIS Spas Authorized Dealer are specifically excluded from any warranty coverage. To obtain warranty service, please notify your WELLIS Spas Authorized Dealer in writing within 14 days of the problem (with problem details, original proof of purchase).
7. The Authorized Dealer will repair or replace any component found defective under the terms of this warranty – and permitted by WELLIS Magyarország Kft. Travelling expenses may apply outside of every European cities.
8. If the Authorized Dealer doesn`t supply the customer with proper service, please notify WELLIS Magyarország Kft. by mail within 10 days of the problem.
9. Electrical connection: All electrical connections are required to be done by a qualified electrician solely. The spa has to be connected to separate current circuit equipped with suitable power switch and life safety relay. Omission of these electrical conditions/requirements entails immediate loss of the warranty.
10. Water connection: All water connections are required to be done by a qualified plumber solely. If the spa is placed indoor make allowances for the following special requirements: The water accumulates around the spa so the socket cover has to be in possession of a suitable drainage. This arrangement hinders the water in collecting.
11. WELLIS Magyarország Kft. offers a limited warranty as described in the Warranty Letter.
12. Warranty claim is enforceable with this warrant letter. Irregular establishing of this warrant letter doesn`t affect to the validity of warranty obligation. If customer doesn`t get this warrant letter from the Authorized Dealer, it doesn`t affect to the validity of warranty obligation.

SPA WARRANTY COVERAGE WILL BE VOID UNDER THE FOLLOWING CONDITIONS

1. If damages caused by inefficient maintenance of water and/or chemical dosage. Terms of water hardness (limits): between 6-10 German degrees.
2. If the spa surface or equipment has been damaged or discoloured as a result of improper water chemistry maintenance, including sanitizers such as trichlor type chlorine, calcium hypochlorite, sodium hypochlorite, and any other chemicals or a chemical dispenser that may rest on the spa surface. Some household cleaners can damage the spa shell or equipment and will void this warranty completely. Use only products that are recommended for spas.
3. If damage to the spa has resulted from an Act of God, force majeure, moving of the spa, improper installation, unstable power conditions, customer negligence, customer abuse, weather and sunlight damage or damage caused in shipment.
4. If damage to the spa has resulted from operation outside – temperature exceed 45°C.
5. If the spa has been subjected to any alterations, after-market product installations, misuses, abuses, or if any repairs are attempted by anyone other than its authorised dealers.
6. If damage to the spa has resulted from improper use of thermo cover.
7. If damage to the spa has resulted from clogged, dirty and/or clogged filter. The spa warranty will be void if the owner does not follow all the instructions in the owner's manual regarding the proper use and care of the spa. Warranty doesn`t apply to filters!
8. If damage to the spa has resulted from improper electrical installation, voltage drop, peak voltage and/or operation is outside the pale of + / - 10% voltage range.
   Electrical conditions:
   For electrical installation it is required to build a 30mA circuit breaker (life safety relay), which is just connected to the spa (not allowed to connect any other devices). This 30 mA circuit breaker is not permitted to be installed in the same place as the spa.
   Required to install IEC, RCCB system in spa`s common surroundings.
   Length of cable is 3 meters at the place of spa installed.
   It is obligatory to observe all information, details and requirements which are in the product`s installation diagram regarding electricity demand and drain installation. These information can be found in the user manual, or able to download from www.wellis.eu. If you didn`t get the document from your dealer, please contact support@wellis.eu.
   If damage to the spa has resulted from debris in jets (i.e. sand, dirty calcium, leaves etc.).
9. Warranty doesn`t extend to the waste water manifold (drain hose), pillows, filters, bulbs and/or pump sealing.

LIMITATIONS

The Warranty expressions specified excludes any other implied or oral undertakings. Purchasers also have current rights under statute which will be respected by WELLIS Magyarország Kft. After a period of 12 months, for the purpose of assessing WELLIS Magyarország Kft. liability, all aspects covered by this Warranty will be treated on a pro-rata basis. WELLIS

Magyarország Kft. or its agents will not be liable for any incidental or consequential loss or injury. Nor will WELLIS Magyarország Kft. be liable for costs associated with but not limited to building alterations or finishes and under no circumstances will be liable for greater expense than the amount paid for the product.

THE SPA OWNER MUST DO EVERYTHING STATED IN THE SPA OWNERS MANUAL AND WARRANTY LETTER TO SAFEGUARD AND MAINTAIN THE SPA!

MANUFACTURER OF YOUR SPA:
WELLIS Magyarország Kft.

Registered:.....31/C, Budaörsi út, H-1118 Budapest, HUNGARY
Central premise:.....hrsz: 0417, Mánteleki út, H-2371 Dabas, HUNGARY

AUTHORIZED DEALER OF YOUR SPA
Company in charge of your spa

Company name:.....

Registered: .....

Central premise: .....

Place of complaint: .....

E-mail address: .....

Website: .....

Phone number: .....

Fax: .....

Person in charge of installation: .....

Date of installation: .....

Service-work

The announcement date of damage: _____
Date of received goods/parts for repair: _____
Date of the return of repaired goods/parts: _____
Date of site service: _____
Improved error: _____
Mode of repair: _____
Failed component: _____
New deadline for the warranty: _____

A

STAMP

The announcement date of damage: _____
Date of received goods/parts for repair: _____
Date of the return of repaired goods/parts: _____
Date of site service: _____
Improved error: _____
Mode of repair: _____
Failed component: _____
New deadline for the warranty: _____

B

STAMP

The announcement date of damage: _____
Date of received goods/parts for repair: _____
Date of the return of repaired goods/parts: _____
Date of site service: _____
Improved error: _____
Mode of repair: _____
Failed component: _____
New deadline for the warranty: _____

C

STAMP

The announcement date of damage: _____
Date of received goods/parts for repair: _____
Date of the return of repaired goods/parts: _____
Date of site service: _____
Improved error: _____
Mode of repair: _____
Failed component: _____
New deadline for the warranty: _____

D

STAMP

SAFETY INSTRUCTIONS

ATTENTION: PLEASE READCAREFULLY AND FOLLOW THE INSTRUCTIONS

AVOIDING THE RISK OF INJURY OF CHILDREN

1. In order to reduce the risk of injury to children, do not allow children to use this spaalone unless they are carefully supervised at all the times.
2. Lower water temperatures arerecommended for young children. Please test the water temperature with yourhands before allowing children to get into the spa, and make sure it iscomfortable for children's usage.
3. Remember that wet surfaces can be slippery, please remind children to be careful when entering or exiting the spa.
4. Don't permit children to climb onto the spa cover.

AVOIDING THE RISK OF INJURY OF BATHERS

1. In order to reducing the risk of injury to bathers, do not remove or lose anysuction fittings. Never operate spa if the suction fitting are broken or missing.
2. Remember that wet surfaces can be very slippery. Take care of a danger ofslipping and falling when entering or exiting the spa.
3. For the sake of health, people with infectious diseases should not be allowed touse the spa.
4. Keep any loose articles of clothing or hanging jewelry away from rotating jets orother moving components.
5. The use of drugs, alcohol or medicine before or during spa use may lead to unconsciousness with the possibility of drowning. Persons using medicines shouldconsult a physician before using spa; some medicine may cause a user to becomedrowsy. While other medicine may affect heart beating, blood pressure changing and circulation problem.
6. Pregnant women should consult a doctor before using the spa.

AVOIDING TNE RISK OF ELECTROCUTION

1. Test the ground fault circuit interrupters before use. Must always to be connectedto a circuit protected by a ground fault interrupt.
2. Check the power cables cord, a damaged power cord may result in death, or seriouspersonal injury due to electrocution. Do not use the spa with damaged power cable, change that immediately before using and need to disconnect the spa from power supply.
3. Do not permit any electrical appliances, such as a light, telephone, radio, or television within 1,5m of a spa. Keep a safe distance from spa, because this failure may result indeath, or serious injury due to electrocuting if the appliance should fallinto the spa.
4. Install your spa in such a way that drainage is away from the electricalcompartment and from all electrical components.
5. Disconnect the spa from the power supply before servicing the electricalcomponents.

NOTICE:

Your spa is anequippedwith two/three massage pumps that allow you tooperate eachpart of the jet system separately or all valves simultaneously.

Do not connect power to an empty spa. Otherwise the components such ascontroller, heater, circulation pump, and other systems could be damaged.

INSTALLATION INSTRUCTIONS

SITE PREPARATION

1. INDOOR/BASEMENT INSTALLATION
   If you take it place your spa indoors, be aware of some special requirements. Water willaccumulate around the spa, so the flooring materials must provide a good grip whenwet proper drainage is essential to prevent a build-up of water around the spa. When building a new room for the spa it is recommended that a floor drain isinstalled. The humidity will naturally increase with the spa installed water may getinto woodwork and produce rot, mildew or otherproblems. Check for airborne moisture's effects on exposed wood, paper, etc in theroom .To minimize these effects, it is best to provide plenty of ventilation to the spa area.

2. OUTROOR AND PATIO INSTALLATION
   It is important that you have solid foundation to support the new spa when youinstall it .Tobe certain your deck or foundation can support your spa. You mustknow the deck maximum load capacity. Consult a qualified building contractor orstructural engineer. To find the weight of your spa, its contents and occupants, please refer to the spa specification chart. This weight per square foot must notexceed the structure's rated capacity: otherwise serious structural damages couldresult,if you install the spa outdoors we recommend a reinforced concrete pad a tleast four inches thick. Don't forget to install some floor drains around your spa sothat it can take the water away during and after the heavy rain.

INSTALLATION

1. Please read and study the OWNER'S MANUAL carefully. Please finda professional people to install and setup for first time.
2. Remove the package, and take down the new spa on the prepared foundation.
3. Open the control box compartment under the display by loosenthe screw and then open the control box. Prepare the accordingly cooper cable(the length will be enough to connect to the power supply), with electricalplug one side and another side without plug and then take the empty side of cablefrom electrical cable. Lead the cable through the pump compartment to the channelof control box compartment.Connect the electrical cable to control box according by electrical drawing in user manual.
4. Your spa has been thoroughly tested duringthe manufacturing process to ensure reliability. So there is a small amount of water even within some grease may have remained in the plumbing after testing, as a result,may have spotted the spa shell or the spa siding prior thedelivery so before filling spa.

OPERATING INSTRUCTIONS

1. Close the drain stub and fill the spa with water

After closing the drain stub, and fill up the tub with soft water to theindicated line inside of the body. If you see any leak(orflood) anywhere, stop the filling procedure until it will be fixed.

2. Power up your spa

First check the main house CIRCUIT INTERRUPTORY that controls the electricto the spa are functioning properly. Then connect the spa plug to the power supply.

3. Trail open and test

Your controller with a factory's first setup already. push the button of PUMP/JET andAIR BLOWER to make jets run for some minutes to check the operations of the jetsystem and purge any remaining air from the heating system. once the jet systemfully operational, priming of the spa is complete. Check and make sure the all aircontroller and all jets are open.

Possible symptom is an AIR LOCK on the first starting or when fills up with new water.

It can cause the jets to appear not work well or at all. It happens when you are filling the spa up fairly rapidly, and air can get trapped in the pipe system that goes to the suction fittings and to the jets. The water level rises up past the openings in the spa, but air becomes locked in the pipes, and then when you start the spa pump, it tries to air bubble(s) still in water, but only air is in the pipes. Sometimes the pump cannot prime itself at that point, so it just runs, but does not pump any water.

Solution:

1. Open the door of pump compartment.
2. Loosen the quick disconnectfitting (white rim on the pump) in front of the pump a little.
3. Let some air get in and it will break the air lock that has developed, and then see some water start to come out.
4. Re-tighten the fitting.
5. Turn the pump on again. It will surge for a few seconds and then start to pump properly.

If it still does not work, please contact a local spa professional to check it for you.

CLEANING

GENERAL INFORMATION:

Water recirculation-filtering

The basic conditions for keeping the water of the spa clean are the removal of mechanical dirt and the blending of the chemicals in the water with continuous water recirculation.
In all our spa's appliances comprising of a pump and a filter are used for this purpose.
- The filter removes the dirt floating in the water or at the surface of the water. Filters with paper or textile filter medium are used in the spa. The dirt settled at the bottom of the spa is filtered out with the aid of the suction and stirring created by the massage pumps.

Protecting the spa

Don't leave the spa expose to the sun without water or the cover. Exposure to direct sunlight can cause solar distress of the shell material. Use a spa cover when spa is not in use, whether it is empty or full. Try to keep your spa away from rain and snow. If possible, build a gazebo for your spa.

1. Don't attempt to open the electrical control box. There are no user serviceable parts inside.
2. Drain, clean and refill your spa with fresh water on a regular schedule.
3. Clean the filter cartridge at least once a month.
4. Have spa users bathe before entering the spa water, showering without soap prior to enter the spa, and using only the rinse cycle when laundering your bathing suit, will help avoiding detergent and soap residue in spa water.

FILTER CARTRIDGE RMOVAL AND CLEANING

You spa filter cartridge can become clogged with mineral particles of calcification from hard water. Which may result in reduced water flow. We recommend to clean the filter cartridges every month.

1. Remove filter grid.
2. Unscrew filter cartridge.
3. Clean with high pressure nozzle to remove all debris that clinging the filter.
4. Soak filter in warm water and WELLIS Alga Shock to remove all body oils and grime. Never use chlorine to clean the filter!

We raise your attention that it is forbidden to clean the spa body with detergents containing alcohol or acetate.
WELLIS Hungary Ltd. does not take any responsibility for damages deriving from the usage of forbidden detergents and this case you cannot validate the guarantee for the spa body.

The chemical equilibrium of the water

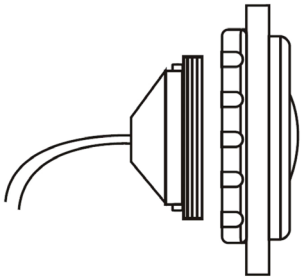
The water of the spa will be clean and clear if its chemical components are in equilibrium.

1. **pH-value:**
   The first important indicator is the pH value of the water. pH is measured in a scale between 0-14 where 7 is the neutral value. Below this level the water is acidic, above it is alkaline. The pH value of the human eye is around 7.5, below 7.2 and above 7.8 the water will sting the eyes of the bather. Experiences have shown that most problems are caused by a too high pH value. An improper value reduces the effect of the disinfectant.
2. **Water hardness:**
   Water hardness is determined by the quantity of calcium and magnesium salts dissolved in the water.
   Hard waters contain too much of these dissolved salts and thus, left alone, scale will form. Scales can cause significant damage both to the walls of the spa, to the piping, filter and to the heating and engineering units. In Hungary waters are medium hard. Water hardness cannot be reduced by the addition of chemicals, but the formation of scales can be prevented.
3. **Disinfection:**
   Disinfectant is the chemical that eliminates or neutralises the microorganisms (bacteria, algae, fungi, viruses) present in the water. Microorganisms are small, microscopic organisms, which cannot be detected with the naked eye and are continuously getting into the water through rain, wind and the body of the bathers. If they are not eliminated they pass from one person to the other through the water (and may cause sickness, infection). Organic matter turns the water of the spa opaque and cloudy. Most often – as we are dealing with warm water spas – bromine or active oxygen is used.
4. **Frothing:**
   Froth is the smaller-bigger agglomeration of the bubbles and colloid contaminants found on the surface of the water. It is mostly caused by the mixing of the dirt, cosmetics, body care lotions, etc. that soak out of the human skin and the chemicals. It endangers the conservation of the aesthetic appearance and cleanliness of the water.
5. **Water analysers:**
   There are several different types of water analysers, which are mostly used to measure chemical and disinfectant effect. Chemical (pH); Disinfectant (Br, O_3)
   Tester types:
   - Box containing tablets and graduated measuring glass.
   - Litmus paper indicators in a box.

Chemicals should always be loaded into the filter housing.
Then proper disinfection of the spa balance, if the chemical levels are not at least 48 hours below the specified value.
Even with the most accurate disinfection after 2-3 months, the water quality is no longer maintain and necessary replace the full water quantity.
Then proposed a large swimming pool, shock-like disinfection.

REPLACING UNDERWATER LIGHT

1. Turn off the power of the spa.
2. Remove plastic panel behind where the underwater light is situated.
3. There is a plug with two wires going into the back of the light.
4. Remove this plug by turning anticlockwise.
5. Replace faulty light globe with a new one.
6. Replace parts and put the plastic panel back on.



TROUBLESHOOTING

Problem	Probable causes	Solutions
Cloudy Water	Dirty filters. Improper sanitization. Suspended particles/organic matter. Overused water.	Clean filters. Shock spa with sanitizer. Add sanitizer. Adjust PH andl or alkalinity to recommended range. Run jet pump(s) and clean filters. Drain and refill the spa.
Water Odor	Excessive organics in water. Improper sanitization. Low PH level.	Shock spa with sanitizer. Add sanitizer. Adjust PH or refill the spa.
Chlorine Odor	Chloramines level too high. Low PH level.	Shock spa with sanitizer.Adjust PH to recommended range.
Musty Odor	Bacteria or algae growth.	Shock spa with sanitizer id problem is visible or persistent drain, clean and refill the spa.
Organic build-up/ scum ring around spa	Build-up of oils and dirt.	Wipe off scum with clean rag-if severe. Drain the spa. Use a spa surface cleaner to remove the scum, and refill the spa.
Algae Growth	High PH level. Low sanitizer level.	Shock spa with sanitizer and adjust PH level. Shock spa with sanitizer and maintain sanitizer level.
Eye irritation	Low PH level. Low sanitizer level.	Ajust PH level. Shock spa with sanitizer and maintain sanitizer level.
Skin irritation/rash	Unsanitary water. Free chlorine level above 5ppm.	Shock spa with sanitizer and maintain s anitizer level. Allow free chlorine level to drop below 5ppm before spa use.
Stains	Total alkalinity andl or PH too low high iron or copper in source water	Adjust total alkalinity and/or PH level. Use a metal deposit inhibitor.
Scale	High calcium content in water-total alkalinity and PH level too high.	Adjust total alkalinity and PH level. If scale requires removal, drain the spa, scrub off the scale, refill the spa and balance the water.

Problem	Probable causes	Solutions
Entire spa is inoperative.	Power failure. GFCI tripped heater high-limit thermostat tripped.	Check power source. Reset GFCI, call for service if not reset. Disconnect power for at least thirty second to reset heater high limit. If it will not reset check for clogged filters. If tripping continues, call for service.
Spa does not heat jets and light operate (Ready, and power indicators are blinking.	Integrated pressure switch open Circulation pump thermal cut-off tripped.	Check for cartridge filters. Integrated pressure switch will reset when the flow of water through the heater has been retored Call for ervice if the heater trips frequently. Check for cartridge filters or are looks in plumbing Disconnected power to the spa, allow circulation pump to cool Circulation pump thermal cut off will reset when pump has cooled and power is reapplied. Call for service if circulation pump thermal cut-off trips frequently.
Jets weak or surging.	Spa water level too low. Filters clogged. Air regulator is closed. Jet closed.	Add water. Clean filters. Open air regulator. Open the jet.
Light inoperative.	Light wiring or assembly is faulty.	Replace light assembly.
Power indicator is blinking. (Entire spa inoperative)	Heater high-limit thermostat tripped.	Disconnect power for at least thirty seconds to reset heater high limit. If it will not reet. Check for clogged filters if tripping continues, call for service.
Ready indicator blinking.	Temperature sensor problem.	Disconnect power for at feast thirty second problem if blinking continues, call for service.

GS100 Tech Sheet

Balboa Water Group

System PN 56300

System Model # MP7-GS100-DCA-3.0K
Software Version # 41

Basic System Features and Functions

Power Requirements

- 230VAC, 1~, minimum 16A, optimum 25A, 50Hz
- 3 wires (line, neutral, ground)

System Outputs

Setup 1 (As Manufactured)

- 230V Pump 1, 2-Speed
- 230V Ozone
- 10V Spa Light
- 230V 3.0kW Heater

Basic System Features and Functions

Any time you change a DIP Switch, other than A1, you must reset Persistent Memory for your new DIP Switch Settings changes to take effect. If you do not reset Persistent Memory, your system may function improperly.

To reset Persistent Memory:

- Power down by disconnecting power source from spa.
- Put a jumper across J43, covering both pins. (See illustration below)
- Power up by connecting power source to spa.
- Wait until "Pr" is displayed on your panel.
- Power down again.
- Remove jumper from J43 (May also move to cover 1 pin only)
- Power up again.

About Persistent Memory and Time of Day Retention:

This system uses memory that doesn't require a battery to store a variety of settings.

What we refer to as Persistent Memory stores the filter settings, the set temperature, and the heat mode.

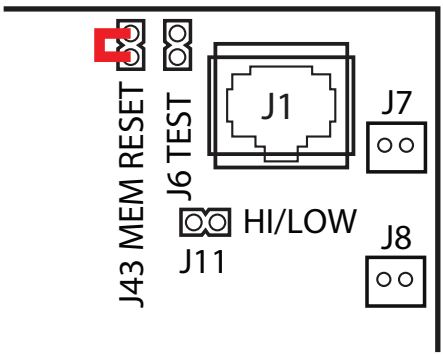
Persistent Memory is not used for Time of Day. Only models with a Serial Deluxe panel installed (VS5xxDZ and GS5xxDZ) can display the time. However, during power loss to the spa, the system will lose the correct time, and reset to 12:00 PM when power is restored.

Power Up Display Sequence

Upon power up, you should see the following on the display:

- Three numbers in a row, which are the SSID (the System Software ID). The third display of these numbers is the Software Version, which should match the version of your system.
  For example, if these three numbers are 100 67 38, that is a VS511SZ at version 38.
- Displayed next is: "24" (indicating the system is configured for a heater between 3 and 6 kW) or "12" (indicating the system is configured for a heater effectively* between 1 and 3 kW). " " should appear for all VS models running at 240VAC. " should appear for all VS models running at 120VAC, as well as all GS models. (*A heater which is rated at 4 kW at 240VAC will function as a 1 kW heater at 120VAC.)
- "Pr" will appear to signal the start of Priming Mode.

At this point, the power up sequence is complete. Refer to the Reference Card for the VS or GS System model of your spa for information about how the spa operates from this point on, including how to adjust the Time of Day if using a Serial Deluxe style panel.



Wiring Configuration and DIP Settings

Setup 1 (As Manufactured)

- 230V Pump 1, 2-Speed
- 10V Spa Light
- 230V Ozone (with Pump 1 Low)
- 3.0kW @ 230VAC Heater
- VL260 Main Panel

GS100

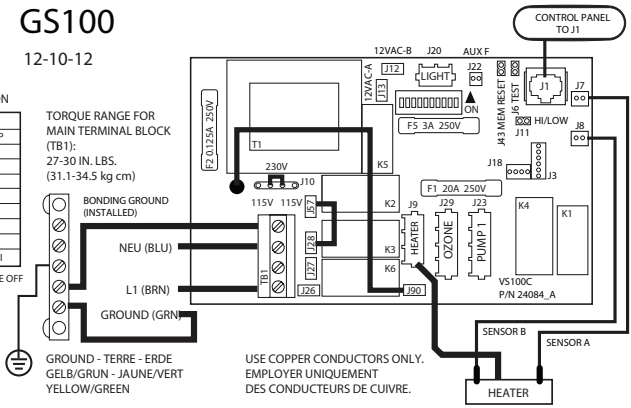
12-10-12

OFF POSITION	DIP SWITCH #	ON POSITION
TEST MODE OFF*	◀ 1	TEST MODE ON*
UNUSED, P1, TEMP, LIGHT	2 ▶	P1, LT, TEMP DOWN, TEMP UP
DUPLEX PANEL	◀ 3	MINI PANEL
N/A MUST BE OFF	◀ 4	N/A MUST BE OFF
SEE PUMP TABLE	◀ 5	SEE PUMP TABLE
60HZ OPERATION	6 ▶	50HZ OPERATION
STD, ECON, SLEEP ALLOWED	◀ 7	STANDARD MODE ONLY
DEGREES FAHRENHEIT	8 ▶	DEGREES CELSIUS
SEE PUMP TABLE	◀ 9	SEE PUMP TABLE
HIGH AMP - HEAT W/P1 HI	10 ▶	LOW AMP - NO HEAT W/P1 HI

*SWITCH 1 IS NORMALLY OFF — ALL UNUSED SWITCHES SHOULD BE OFF

PUMP TIMEOUTS TABLE			
SWITCH 5	SWITCH 9	LOW SPEED	HIGH SPEED
OFF	OFF	2 HOURS	15 MINUTES
ON	OFF	2 HOURS	30 MINUTES
OFF	ON	15 MINUTES	15 MINUTES
ON	ON	30 MINUTES	30 MINUTES

TORQUE RANGE FOR MAIN TERMINAL BLOCK (TB1): 27-30 IN. LBS. (31.1-34.5 kg cm)



GROUND - TERRE - ERDE
GELB/GRUN - JAUNE/VERT
YELLOW/GREEN

USE COPPER CONDUCTORS ONLY.
EMPLOYER UNIQUEMENT
DES CONDUCTEURS DE CUIVRE.

FOR SUPPLY CONNECTIONS, USE CONDUCTORS SIZED ON THE BASIS OF 60°C AMPACITY BUT RATED MINIMUM OF 90°C.

3.0 KW @ 230VAC
HEIZELEMENT
RADIATEUR

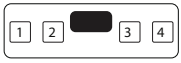
LOCATION	DEVICE
J23	NETZSTROMVERSORGUNG 2-GESCHW.-PUMPE 1 ALIMENTATION POMPE 1 A 2 VITESSES 2-SPEED PUMP 1
J29	OZONGENERATOR GENERATOROZONE OZONE GENERATOR
J20	BELEUCHTUNG ECLAIRAGE BAIN HYDRO SPA LIGHT

WARNING: Main Power to system should be turned OFF BEFORE adjusting DIP switches.
WARNING: Persistent Memory (J43) must be RESET to allow new DIP switch settings to take effect. (See Persistent Memory page)

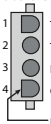
Panel Button Assignments

1=Pump 1
2=Light
3=Temp Down
4=Temp Up

Panel Button Positions



Board Connector Key



1 Typically Line voltage
2 Typically Line voltage for 2-speed pumps
3 Neutral (Common)
4 Ground

Note flat sides in connector

DIP Switches and Jumpers Definitions

SSID 100 59 41 Base Model GS100

DIP Switch Key

A1 Test Mode (normally OFF)

A2 "ON" position: Button layout will be: Pump 1, Light, Temp Down, Temp Up *
"OFF" position: Button layout will be: Unused, Pump 1, Temp, Light

A3 "ON" position: use Mini Panel *
"OFF" position: use Lite Duplex or Digital Duplex panel

A4 N/A (must be OFF)

A5 Pump 1 timeout, see Table 1

A6 "ON" position: 50Hz operation
"OFF" position: 60Hz operation

A7 "ON" position: Standard mode only
"OFF" position: Std/Ecn/Sleep mode changes allowed

A8 "ON" position: temperature is displayed in degrees Celsius
"OFF" position: temperature is displayed in degrees Fahrenheit

A9 Pump 1 timeout, see Table 1

A10 "ON" position: heater is disabled while the high-speed pump is running (low amperage mode)
"OFF" position: heater can run while the high-speed pump is running (high amperage mode)

Table 1 Pump 1 Timeouts

A5	A9	Low-spd	Hi-spd
OFF	OFF	2 hours	15 min
ON	OFF	2 hours	30 min
OFF	ON	15 min	15 min
ON	ON	30 min	30 min

* Panels with button layout are not compatible when A2 or A3 is ON.

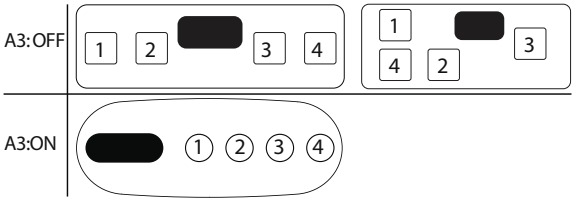
Note: No blower or second pump available.

Jumper Key

J43 When jumper is placed on 2 pins during power-up, system will reset persistent memory.
Leave on 1 pin only to enable persistent memory feature.

WARNING:
- Setting DIP switches incorrectly may cause abnormal system behavior and/or damage to system components.
- Refer to Switchbank illustration on Wiring Configuration page for correct settings for this system.
- Contact Balboa if you require additional configuration pages added to this tech sheet.

Panel Button Positions



Panel Button Assignments

A2: OFF	1=Unused 2=Pump 1	3=Temp 4=Light
A2:ON	1=Pump 1 2=Light	3=Temp Down 4=Temp Up

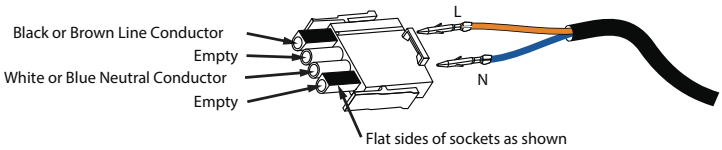
Ozone Connections

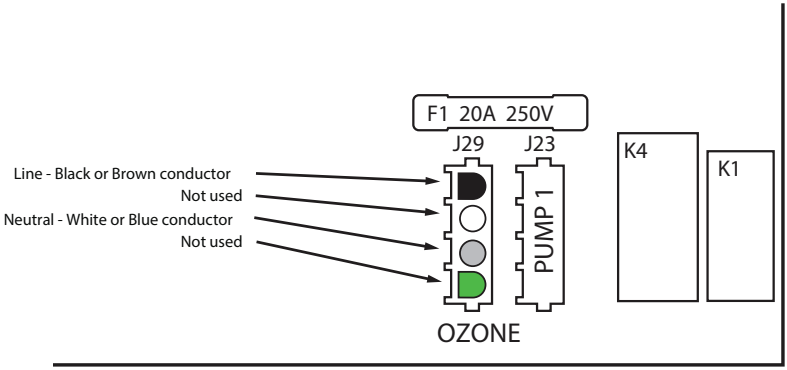
Ozone Connector Voltage: The GS100 circuit board is factory configured to deliver a preset voltage of 120V to the on-board ozone connector (J29).

Balboa Ozone Generator: The board is set up to operate a 120V ozone generator; the connector on the ozone generator is likely to be configured correctly, but should be compared to the illustration below.

Note: A special tool is required to remove the pins from the connector body once they are snapped in place. Check with your Balboa Account Manager for information on purchasing a pin-removal tool.

Balboa Ozone connector configuration for 230VAC 50Hz:



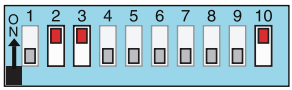


VL260 user's manual

Initial Start-up

When your spa is first actuated, it will go into Priming mode, indicated by. "Pr" Please see the M-7 Installation Instruction Manual for complete instructions on Power-up and Pump Priming. The Priming mode will last for less than 5 minutes (press "Temp" or "Set" to skip Priming Mode) and then the spa will begin to heat the spa and maintain the water temperature in the Standard mode

Switchbank



DIP switch A3 must be ON

Temp/Set (80°F - 104°F / 26°C - 40°C)

The start-up temperature is set at 100F°/37°C. The last measured temperature is constantly displayed on the LCD.

Note that the last measured spa temperature displayed is current only when the pump has been running for at least 2 minutes.

To display the set temperature, press the "Temp" or "Set" pad once.

To change the set temperature, press the pad a second time before the LCD stops flashing. Each press of the "Temp" or "Set" pad will continue to either raise or lower the set temperature.

If the opposite direction is desired, release the pad and let the display revert to the current water temperature. Press the pad to display the set temperature, and again to make the temperature change in the desired direction.

After three seconds, the LCD will stop flashing and display the current spa temperature.

Note: *If there is not a blower on the system, an alternate panel with separate "Up" and "Down" buttons in place of a "Set" or "Temp" button may be used. Simply press "Up" or "Down" where a "Temp" or "Set" button press is indicated.*

Jets

Touch the "Jets" button once to activate the low speed of the pump and again for the high speed. Press the "Jets" button again to turn off the pump. If left running, the low speed of the pump will automatically turn off after 4 hours, and the high speed will automatically turn off after 15 minutes. The low speed of the pump runs when when the blower is on. It may also activate for at least 2 minutes every 30 minutes to detect the spa temperature and then to heat to the set temperature if needed, depending upon mode. When the low speed turns on automatically, it cannot be deactivated from the panel; however, the high speed may be started.

Blower (optional)

This button is used to turn the blower on and off. If left on, the blower automatically turns off after 15 minutes.

Jets 2 (optional)

If your system has a pump 2 installed instead of a blower, it behaves exactly like a blower would.

Light

Press the "Light" button to turn the light on and off. If left on, the light automatically turns off after 4 hours.

Mode

Mode is changed by pressing the "Temp" or "Set" button, then pressing the "Light" button.

Standard Mode is programmed to maintain the desired temperature. Note that the last measured spa temperature displayed is current only when the pump has been running for at least 2 minutes. "St" will be displayed momentarily when you switch into Standard Mode.

Economy Mode heats the spa to the set temperature only during filter cycles. "Ec" will display solid when temperature is not current, and will alternate with temperature when temperature is current.

Sleep Mode heats the spa to within 20°F/10°C of the set temperature only during filter cycles. "SL" will display solid when temperature is not current, and will alternate with temperature when temperature is current.

Preset Filter Cycles

The first filter cycle begins 6 minutes after the spa is energized. The second filter cycle begins 12 hours later. Filter duration is programmable for 2, 4, 6, 8 hours or for continuous filtration (indicated by "FC"). The default filter time is 2 hours.
To program, press "Temp" or "Set," then "Jets." Press "Temp" or "Set" to adjust. Press "Jets" to exit programming.

The blower purges for 30 seconds at the beginning of each filter cycle. The low speed of the pump runs during filtration and the ozone generator (if installed) will be enabled.

Freeze Protection

If the temperature sensors detect a drop to below 44°F/6.7°C within the heater, the pump and blower will automatically activate to provide freeze protection. The equipment stays on until 4 minutes after the sensors detect that the spa temperature has risen to 45°F/7.2°C or higher. In colder climates, an optional additional freeze sensor may be added to protect against freeze conditions that may not be sensed by the standard sensors. Aux freeze sensor protection acts similarly except with the temperature thresholds determined by the switch and without a 4-minute delay in turnoff. See your dealer for details.

Diagnostic messages

Message	Meaning	Action Required
	No message on display. Power has been cut off to the spa.	The control panel will be disabled until power returns. Spa settings will be preserved until next power up.
--	Temperature unknown.	After the pump has been running for 2 minutes, the temperature will be displayed.
HH	"Overheat" - The spa has shut down. One of the sensors has detected 118°F/48°C at the heater.	DO NOT ENTER THE WATER. Remove the spa cover and allow water to cool. Once the heater has cooled, reset by pushing any button. If spa does not reset, shut off the power to the spa and call your dealer or service organization.
OH	"Overheat" - The spa has shut down. One of the sensors has detected that the spa water is 110°F/43°C.	DO NOT ENTER THE WATER. Remove the spa cover and allow water to cool. At 107°F/42°C, the spa should automatically reset. If spa does not reset, shut off the power to the spa and call your dealer or service organization.
IC	"Ice" - Potential freeze condition detected.	No action required. The pump and blower will automatically activate regardless of spa status.
SA	Spa is shut down. The sensor that is plugged into the Sensor "A" jack is not working.	If the problem persists, contact your dealer or service organization. (May appear temporarily in an overheat situation and disappear when the heater cools.)
Sb	Spa is shut down. The sensor that is plugged into the Sensor "B" jack is not working.	If the problem persists, contact your dealer or service organization. (May appear temporarily in an overheat situation and disappear when the heater cools.)
Sn	Sensors are out of balance. If alternating with spa temperature, it may just be a temporary condition. If flashing by itself, spa is shut down.	If the problem persists, contact your dealer or service organization.
HL	A significant difference between temperature sensors has been detected. This could indicate a flow problem.	Check water level in spa. Refill if necessary. If the water level is okay, make sure the pumps have been primed. If problem persists, contact your dealer or service organization.
LF	Persistent low flow problems. (Displays on the fifth occurrence of "HL" message within 24 hours.) Heater is shut down, but other spa functions continue to run normally.	Follow action required for "HL" message. Heating capability of the spa will not reset automatically; you may press any button to reset.
dr	Possible inadequate water, poor flow, or air bubbles in detected in the heater. Spa is shut down for 15 minutes.	Check water level in spa. Refill if necessary. If water level is okay, make sure the pumps have been primed. Press any button to reset, or this message will automatically reset within 15 minutes. If problem persists, contact your dealer or service organization.
dy	Inadequate water detected in heater. (Displays on third occurrence of "dr" message.) Spa is shut down.	Follow action required for "dr" message. Spa will not automatically reset. Press any button to reset.

Warning! Shock Hazard! No User Serviceable Parts.

Do not attempt service of this control system. Contact your dealer or service organization for assistance. Follow all owner's manual power connection instructions. Installation must be performed by a licensed electrician and all grounding connections must be properly installed.